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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/863,273	05/24/2001	Cheol Jin	2950-0194P	9250
2292	7590	08/25/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			PSITOS, ARISTOTELIS M	
			ART UNIT	PAPER NUMBER
			2653	21

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/863,273

Applicant(s)

JIN, CHEOL

Examiner

Aristotelis M Psitos

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/18/04 and 5/18/04 has been entered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 11- 25,27-29 are is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizume et al considered with Finkelstein et al. Shimizume et al discloses a disc driving method in a recording/reproducing system wherein the recording modes are altered between a CAV and a CLV mode as required along the radius of a disc.

With respect to claim 11, Shimizume et al discloses a reproduction system – see the below description with respect to figure 6 and why the examiner considers the claims met under 103 considerations, the system refers to cd-rom – see col. 7 lines 5-10. The examiner interprets such to mean that atip data/sync signals embedded in a wobble physical track are present, especially because such is considered well known.

If applicants' can convince the examiner that such is not what Shimizume et al is discussing, then the examiner further relies upon the Fairchild et al disclosure – see atip recording for wobbled grooves in this environment – the entire document.

It would have been obvious to modify the base system of Shimizume et al and modify it with the above teaching from Fairchild et al, motivation is to use standard disc formats commonly available.

The remaining two steps in claim 11, checking the frequency and determining (note there is no positive recitation that any change is made in this claim), are met by the signal reproduction (read – frequency detection) - see the description with respect to figure 7 starting at col. 10 line 35.

With respect to claim 12, the examiner concludes that although Shimizume et al is drawn to a reproducing system, Finkelstein et al teaches the direct read during write ability.

Although figure 6 focuses upon a reproduction system, the examiner considers the recording ability to be the mirror image thereof – i.e., information had to have been recorded onto the disc in order for it to be reproduced. The examiner concludes that because as disclosed the system is drawn to a recording or reproducing system, the recording ability is present.

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Nevertheless, although there is no clear indication that the ability of reading of the information while recording in Shimizume et al, Finkelstein et al teaches in this environment, the ability of direct read while write.

It would have been obvious to modify the base system of Shimizume et al with the above teaching from Finkelstein et al, motivation is to ensure proper recording during writing as well as monitoring the required signal format parameters.

With respect to claim 13, the sync signal is by definition a predetermined signal, and the pll ability provides for a detection of the period thereof ($f = 1/\text{period}$).

With respect to claim 14, this occurs when the radius increases (goes to the outer diameter of the disc).

With respect to claim 15, such is present, i.e., the speed is determined.

With respect to 16 & 17, such is present, i.e., the speed if based on a predetermined signal, that signal representing the speed for that section/segment the transducer is located.

With respect to claim 18, the reading of the sync information is interpreted as meeting the limitations of claimed "the properties of the recording medium".

With respect to claim 19, this claim contains similar limitations corresponding to claim 11 and the above analysis with respect to claim 11 is repeated and hence meets this claim as well.

With respect to claim 20, see the above analysis with respect to claim 12.

With respect to claim 21, see the above analysis with respect to claim 13.

With respect to claim 22, see the above analysis with respect to claim 14.

With respect to claim 23, see the above analysis with respect to claim 15.

With respect to claim 24, the low frequency is interpreted as the functioning of the lpf element 23 feeding that signal forward to elements 27, 28,30.

With respect to claim 25, the low frequency is measured/compared with a predetermined frequency.

With respect to claim 27, see the above analysis with respect to claim 18.

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With respect to claim 28, this occurs when the system moves the transducers position from the outer diameter to the inner diameter.

Claim 29 is apparatus elements, and as far as the examiner can determine is met by the above combination of elements.

Response to Arguments

Applicant's arguments filed 5/18/04 have been fully considered but they are not persuasive. Applicants' arguments focusing on the newly introduced limitations are not persuasive – see the above analysis with respect to the primary reference to Shimizume et al as it detects the reproduced signal through as further discussed in col. 9 lines 35 plus, note lines 45-50 reference to absolute time – which the examiner interprets as the atip information. The checking and determining steps are met by the systems response thereto through elements 103 and 20 as further discussed in col. 9 lines 55 plus.

2. Claims 11,13-19,21-23 and29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kusano et al further considered with Fairchild et al.

Kusano et al discloses an optical disc recording and reproducing system relying upon detected signals for appropriately controlling the speed of the spindle driver to enable appropriate signal processing. See the discussion with respect to figure 9 for the recording.

The ability of having sync signals recorded on the record medium itself as wobbled signals is known/taught by the Fairchild et al system.

It would have been obvious to modify the base system of Kusano et al with the above teaching from Fairchild et al, motivation is to permit a more defined (tighter – sync ability) by reading the sync information directly from the medium itself.

With respect to the limitations of claims 13 & 21, the sync signal is met, i.e., it is present when such is reproduced.

With respect to claims 14 and 22, this occurs as the transducer element goes from the inner to the outer diameter of the record.

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With respect to claims 15,16,17 and 23, the speed is set to a predetermined signal (the sync signal).

The apparatus limitations of claim 29 are met by the above combined systems.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

3. Claims 12 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 1 and 19 as stated in paragraph 2 above, and further in view of Finkelstein et al.

This reference teaches in this environment, the ability of direct read while write.

It would have been obvious to modify the base system as sated above in paragraph 2, with the additional teaching from Finkelstein et al, motivation is to ensure proper recording during writing as well as monitoring the required signal format parameters.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

4. Claims 11- 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al considered with JP documents (KOKOKU) No. 44927/1993 and (KOKOKU) No. 33470/1993.

The above documents are not readily available at this time juncture (KOKOKU) nos. The examiner is relying upon the description of these documents as noted in col. 1 lines 40-55 in US 5737306 for teaching the ability of having a composite cav/clv disc recording ability.

Although the description fails to clarify/specify how the control is performed to switch from the cav/to clv zone, or vice-versa, Saito et al teaches in this environment the ability of having clock information in the wobble track for synchronizing the read/write functions.

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It would have been obvious to modify the base system of the KOKOKU Nos. 44927/1993 & 33470/1993 with the above teaching of wobble synch signals, motivation is to provide for proper control of the write ability and permit appropriate switching as desired.

With respect to claims 12 and 20, the sync signal is detected while recording.

With respect to claims 13 and 21, the sync signal is present and met by the ability in Saito et al of detecting such by the use of pll circuitry ($f = 1/t$).

With respect to claims 14 and 22, this occurs as the transducer element goes from the inner to the outer diameter of the record.

With respect to claims 15,16,17 and 23, the speed is set to a predetermined signal (the sync signal).

With respect to claim 24, see the discussion in Saito et al with respect to the frequencies – at col. 10 lines 49 plus.

With respect to claims 25,26,27 and 28:

- a) the pll is interpreted as meeting the comparison limitation of claim 25,
- b) see the description with respect to figures 5 & 9 for the limitations with respect to claim 26,
- c) with respect to claim 27, the sync signal is interpreted as meeting "properties of a recording medium",
- d) with respect to changing (when to change) to clv, this occurs as the transducer element moves from the outer to inner locations along the discs of the base KOKOKU documents.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

5. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 1 or 19 as stated above and further considered with Kusano et al.

The apparatus limitations of claim 29 are considered met, detecting means is the output detectors in Saito et al, the checking means is interpreted as the pll subsystem. Although the above combined

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teachings imply that there is a means to determine when to switch, it is not clearly found in the information contained thereto. Nevertheless, the use of control elements (microprocessors) for decision-making is taught by the Kusano et al reference – see the description of figure 9 for instance.

It would have been obvious to modify the base system of

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

6. Claims 11-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Choi.

Choi discloses a variable rate recording apparatus having a:

- a) means to detect wobble signal – element 14 in figure 1 for instance,
- b) checking means for the frequency – element 15 for instance, and
- c) a determining means – the CPU

Applicants' attention is further drawn to the description found in col. 1 lines 20 to 50 for instance.

With respect to method claims 11 and 19, the steps recited are met by the above noted analysis/disclosure.

With respect to claims 12 and 20, the detection is performed for recording.

With respect to claims 13 and 21, sync signal is the predetermined signal.

With respect to claims 14 and 22, this occurs as the disc moves the transducing element along the disc to the outer diameter.

With respect to claims 15, 16, 17, and 23, 24, 25, 26 and 28:

- a) determination is appropriately made (association between the recording speed and frequency – claims 15, 16, 23);
- b) see col. 2 lines 60-65 with respect to claim 17;
- c) see col. 1 lines 34-36 with respect to claims 24, and lines 40-50 in the same column with respect to claim 25;

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d) with respect to claim 26, dsp (digital signal processing) of the detected signal is considered inherently present and hence this claim is met;

e) with respect to claim 28, the mode is changed appropriately in accordance with the determined and detected signals.

With respect to claims 18 and 27 this is met by either the detection of the atip signal or alternatively by the use of the frame signal comparison – elements 131-134 as they are feed back to switch element sw accordingly.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M Psitos whose telephone number is (703) 308-1598. The examiner can normally be reached on M-Thursday 8 - 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (703) 305-6137. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aristotelis M Psitos
Primary Examiner
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